

Patent Claims

1. A device which is provided for fixing in a motor vehicle and is intended for cleaning a window or headlamp lens, having
5 a washing nozzle retained by a nozzle holder, and having means for adjusting the angle of inclination of the washing nozzle, characterized in that the means for adjusting the angle of inclination of the washing nozzle (9) are formed in relation to the nozzle holder (4).
- 10 2. The device as claimed in claim 1, characterized in that the washing nozzle (9) is fixed in an insert (6) arranged in the nozzle holder (4), and in that the insert (6) is retained in a rotatable manner.
- 15 3. The device as claimed in claim 1 or 2, characterized in that the nozzle holder (4) in the region of the washing nozzle (9), has a large opening (11) in comparison with a diameter of a washing-fluid jet which can be generated by the washing
20 nozzle (9).
4. The device as claimed in at least one of the preceding claims, characterized in that the nozzle holder (4) has a chamber (13) which is arranged immediately upstream of the
25 insert (6) or the washing nozzle (9), as seen in the direction of flow, and, in order to connect a washing-agent supply to the washing nozzle (9), is formed over the entire pivoting range thereof.
- 30 5. The device as claimed in at least one of the preceding claims, characterized in that the nozzle holder (4) is in mushroom form and, on the underside of its head region, has latching means (7, 8) which are provided for connecting it to a bodywork panel (3).

6. The device as claimed in at least one of the preceding claims, characterized in that the insert (6) or the washing nozzle (9) is formed cylindrically or conically and has means
5 which are accessible from outside the nozzle holder (4) and are intended for the attachment of a turning tool.

7. The device as claimed in at least one of the preceding claims, characterized in that the insert (6) is designed as a
10 washing nozzle (9), the insert (6) having a cutout (16) which generates the washing-fluid jet (14).

8. The device as claimed in claim 7, characterized in that the cutout (16) which generates the washing-fluid jet (14) is a
15 bore.

9. The device as claimed in claim 8, characterized in that the bore (16) tapers continuously or in a step-like manner downstream.

20 10. The device as claimed in claim 7, characterized in that the insert (6) is divided, along its longitudinal axis (15), into two half-cylinders (6a, 6b) or half-cones, and in that the half-cylinders (6a, 6b) or half-cones lie one upon the other by
25 way of their section planes (19a, 19b) from the formation of a cylinder or cone.

11. The device as claimed in claim 10, characterized in that the half-cylinders (6a, 6b) or half-cones are connected
30 integrally to one another at one edge of their section planes (19a, 19b), preferably by way of a film hinge (18), with the result that they can be swung together to form a cylinder or cone.

12. The device as claimed in either of claims 10 and 11,
characterized in that the cutout (16) which generates the
washing-fluid jet (14) is arranged in the region of at least
one section plane (19a, 19b) of a half-cylinder (6a, 6b) or
5 half-cone.

13. The device as claimed in claim 12, characterized in that
the cutout (16) which generates the washing-fluid jet (14) is
arranged in the region of a section plane (19b) of a
10 half-cylinder (6b) or half-cone, and in that the section planes
(19a) of the second half-cylinder (6a) or half-cone is designed
as a sealing surface (19a).

14. The device as claimed in one of claims 10 to 13,
15 characterized in that the cutout (16) is a fluidic structure
(21) which generates an oscillating washing-fluid jet (14).

15. The device as claimed in one of claims 10 to 14,
characterized in that shaped elements (23, 24), preferably
20 spikes, protrusions, grooves, bores, are arranged on the
half-cylinders (6a, 6b) or half-cones.